

Mohave County Miner.

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Rigid Inspection Law Means Heavy Expense to Mining Companies.

Thousands of dollars will be spent by the mining companies of Arizona within the next few months in making changes and improvements to comply with the state mine inspection law passed by the first legislature.

This law creates the office of state mine inspector, who shall be elected once every two years. As the law was passed after the last election, Governor George Hunt appointed John Bolin of Bisbee to fill the position until next fall. Acting under the provisions of the late act, Mr. Bolin has appointed three deputy inspectors. They are: J. C. Wilson, Chloride, Mohave county; John Harper, Globe, Gila county; William Farrell, Bisbee, Cochise county.

Inspector Bolin is at his office at the state capitol, systematizing the work that is being started. Mr. Farrell is making inspections in Cochise county; Mr. Harper in Gila and Greenlee; Mr. Wilson in Mohave and Yuma. They are serving written notices on the mine operators of the changes that must be made. Reasonable time is being given for compliance with the inspection law.

"It is impossible for me to estimate how much it will cost the mine owners of Arizona to comply with the rigid law passed by our legislature," Inspector Bolin said today. "The aggregate sum will be immense, however. Right in the Warren district of Cochise county the companies are being compelled to make extensive changes in the way of equipment. That their principal expense is to comply with that section of the law providing that underground trolley wires must be six feet and a half above the floor.

"In most Arizona mines the trolley wires are placed about six feet from the floor, and often swelling ground forces them down within five feet of the rails. There have been many accidents at Bisbee from this very cause. To change timbers, enlarge workings and do other work necessary to lift the wires the required distance, will cost a great deal of money.

"New cages must be provided in many instances. For shafts 300 feet deep or more they must be metal-roofed, be five feet in height and have hand holds on each deck.

"Another item of expense will be in providing gallow-frames that are 35 feet in height, as the law requires. It is in my power, however, to permit the use of gallow-frames already built if, in my opinion, they do not endanger life and limb.

The principal purpose of the mine inspection law is to prevent accidents. It is the duty of the mine inspector to keep records of all accidents, and mine operators are required to furnish him with the necessary data. Whenever possible the inspector or one of his deputies shall attend coroner's inquests over the remains of those killed in mine accidents.

Every mine employing fifty men or more must be inspected once every three months, and each one that employs six men or more, once a year. When the inspector, or deputy, finds that the law is not being complied with, he must give the operator notice in writing of the changes that are required. If the changes are not affected within a reasonable time the operator can be fined 100% to 1000%, or imprisonment for one year. If the violation is particularly flagrant, he may be both fined and imprisoned.

At each mine a record of inspection shall be kept. Whenever an inspection has been made the inspector shall write his findings in this record.

Where there are ten or more men or employees, a stretcher or blankets shall be kept constantly at the shaft mouth. When there are more than 100 men a medicine chest with first-aid remedies and disinfectants shall be provided. In case there are more than 300 men a first-aid corps shall be organized, and it shall receive instructions at least once a month from a competent physician.

Explosives must be kept in a separate store-house a safe distance from the shaft mouth, and the inspector has power to regulate the amount of explosives that shall be stored in any one place. No more than a supply sufficient for twenty-four hours' work shall be taken underground.

The date of manufacture shall be stamped upon each package of explosives, and no explosive that has been manufactured more than one year shall be sold within the state. Persons selling explosives shall keep accurate record of all transactions.

In no circumstances shall anyone use an iron tamping bar. Elaborate provisions are made for the giving of warnings when an explosion is about to take place.

Fire protection must be provided in all big mines, and all ones where there is only one exit. Where a shaft is 100 feet deep and 200 feet of drifting or crosscutting has been done, an extra exit or escape shaft shall be provided.

Several long paragraphs are devoted to minute directions for hoisting engineers. No boy under 18 and no person who is intoxicated shall be permitted under ground in a mine or to act as a hoisting engineer. Hoists must be equipped with proper indicators and no cage shall be lifted at a speed greater than 800 feet a minute. Hoisting apparatus must be inspected every twenty-four hours by some competent person.

Men are not permitted to work in a mine where there is more than 0.25 per cent of carbon dioxide in the air, except immediately after an explosion.

There are numerous other provisions for the safety of underground miners. The companies are not complaining, but are making the changes required as rapidly as possible. Heretofore there have been almost no laws governing the equipment of mines. Each company has provided the safety apparatus it was pleased to furnish.—Arizona Democrat.

Mining Experts.

When Will C. Higgins of the Salt Lake Mining Review met a mining expert the other day that did not look good to him, he immediately rushed to the editorial sanctum and relieved himself of the following to his ever-patient burro.

"Some experts are born, some are made, and some are turned out by colleges and universities, but it is only the ones who are born that are any good. The rest of them become famous for the many good mines they turn down. It was the made-to-order expert that turned down Tombstone in the early days. It was the same order of ducklings that passed up the Silver King mine in Arizona, and the United Verde in the same state. The same nifty fellows condemned Cripple Creek, Tonopah and Goldfield; and, even now, they are swarming over the country spoiling big mining deals and losing big money for their clients; and it is a wonder, judging from the black eyes so many mining districts are getting from them every year, that the industry keeps up its lick so well, and that so many new mines are developed into big producers and dividend payers. Of course, this statement is as perplexing to you as it is to the man of means who really wants to buy a promising property; but, any man with nails in his shoes and grease across his face can readily solve the riddle. Ask him and he will tell you that it is the man who works in the mine, who broke the first ore from the outcrop, and who knows the formation like a book, that is the real expert. And he will tell you also that it was an 'intelligent miner,' and not an expert, who induced Senator Clark to the United Verde; that it was the success of leasers which induced Philadelphia capital to invest in Tonopah, and then it was a grizzly prospector who first commended Goldfield prospects to eastern capitalists; and that all of these mines have made good, notwithstanding the fact that buyers were duly warned by expert friends and employees that they were being handed gold bricks."

Border Mines Opens a New Ore Body.

A Tucson dispatch says:—The Border Mines company, which recently took over the old Austerlitz property at Oro Blanco, has just opened up a new ore body that promises to put it in the bonanza class in short order if the present showing is a criterion for further development. The strike was made in a crosscut from the main tunnel and the ore body is from 12 to 20 feet wide. In the course of development they are taking out eight to ten tons of ore a day that net 30% to 40% to the ton after all smelter and freight charges are paid. In addition to this they are taking out enough milling ore that runs from 5% to 20% to keep their 3-stamp mill running, and are shipping from two to three tons a day of concentrates to the smelter at El Paso that nets from 80% to 100% to the ton.

The Austerlitz mine was bought a short time ago by Woodworth & Layne, who had been operating in Sonora and closed down pending more settled conditions in Mexico. They organized the Border Mines company to work the property, and immediately started a force of miners on development work, with the result that they have opened two good ore bodies in the last 60 days. New machinery was added to the mill on the property and they now have a perfect unit to which they will add as the output from the mine is increased. As they are breaking a hundred tons of milling ore a day at the present time it is only a question of a few weeks until they will be compelled to double the number of stamps.

The ore is all handled directly from the stopes into the chutes and ore cars and on to the mill, no hoisting whatever being done, making the cost of production very low. About 40 men are employed on the property.

Porphyry Copper Possibilities.

There is a field open for the experimentally inclined, states the Salt Lake Tribune, and a big field, with rewards of tremendous parts awaiting the laboratory prospector. The porphyry copper proposition still is in its infancy and that is why the operator makes no better extraction of his copper ore contents than from 60 to 70 per cent. Here is a waste of from 30 to 40 per cent of all the copper held in the ore treated, a waste that is being impounded in enormous tailings dumps for future disposition. In Michigan the copper men are going over their old tailings dumps and rescuing the red metal wasted in the first years of operations. In Utah, Arizona and Nevada the same thing will be done eventually, but in the latter named States the right process is yet to be discovered.

There is an enormous copper deposit in the West about which very little is being heard these days, but which is known to exist by many who believe that it some day will become available to the world. This is the deposit or deposits in southern Utah and northern Arizona along the Colorado river. This copper ore is peculiar in that it exists in sandstone formation in the form of a carbonate. The sandstone is ribbed and torn by countless fissures from which the copper solutions have come to impregnate the surrounding rock. There is a saying that a very small amount of copper solution can stain a whole mountain, but the Colorado river sandstone ore is more than a stain, as frequent investigations have shown. The ore averages far better in the red metal than the typical porphyry proposition, the one great question being the proper treatment of this rock to compel its giving up the metal values.

A considerable amount of experimenting on this sandstone copper ore has been done in the past, but no effort has been made as far as is known, in recent years, to apply the experience and knowledge the copper man possesses as the result of the tremendous advance made in the past decade in

metallurgy. There is some leaching system applicable to this neglected ore, but it remains for the right man to utilize it. Many familiar with these southern fields are positive that at some near day they will provide the basis for a copper boom in Utah of gigantic proportions.

These fields under present circumstances are difficult of access owing to lack of transportation facilities. It is asserted that water is scarce, but water is being found in the deserts of Nevada in spots where no man heretofore would dare hope for it. But water, railroads and everything else required can be secured once capital makes up its mind to open these fields, and a deposit one mile long, a half mile and forty feet thick, averaging mighty close to 4 per cent copper, is worth thinking about. There is one deposit in southern Utah described as having such dimensions.

In the Silver Reef section of the State, noted the mining world over for its production of silver from sandstone formation, are millions of tons of sandstone untouched which are said to hold splendid promise. It is low grade silver ore in the main, but at any time one stands to discover a big body of the pure metal, as they did in the days of old, and many believe that this silver ore is underlaid with copper. There is not a more fascinating section from the mineralogist's standpoint in all the world than this Utah field, and that it is well worth investigation at the hands of big capital is the opinion of many of the best versed men of the State.—Salt Lake Tribune.

The Magma Copper Company's new air compressor arrived at the Florence depot Saturday, was loaded on to an iron truck, capable of carrying 30,000 pounds, and started for the mines, at Superior, Wednesday. It is one of the largest compressors in the state. With this machine added to the old compressor equipment at the mine the air supply will be ample for all purposes. The foundation for this new compressor has been completed, hence upon its arrival at the mine it will not take long to get it ready for operation. When all of the new equipment at the mine is ready to go into commission, Supt. Neary will begin sinking the shaft to the 1500 foot level and push this work as fast as possible.—Florence Blade-Tribune.

During the summer months mothers of young children should watch for any unnatural looseness of the bowels. When given prompt attention at this time serious trouble may be avoided. Chamberlain's Colic, Cholera and Diarrhoea Remedy can always be depended upon. For sale by all dealers.

Consolidation of Operations at Butte.

When it was first proposed to consolidate all the subsidiaries of the Amalgamated Copper Company at Butte, Montana, the thing was urged as a movement in the direction of economy, although the step was universally believed to be part and parcel of a plan for a copper trust. The annual report of the Anaconda Copper Company, recently issued, indicates that the aim at economy was well taken, and that this was sufficient warrant for consolidation.

The report of President Thayer points out the extraordinary improvements that were in progress during the last fiscal year, both in the way of underground work and in surface equipment. Electrification is the principal change to be considered. Not only is this source of power in use at the mines, but the transportation system is also to be operated by electricity. The previous dullness of the copper market has led to curtailment of output, while the change from steam to electricity necessarily caused some idleness. Not only were these extraordinary improvements charged to current expenditures, but the lesser production naturally tends to a higher cost per pound of copper. In the face of these circumstances, the cost of copper per pound was less than in previous years. The grade of the ore treated was no higher than in former years. Mr. Thayer says that this showing only partly reflects as yet the benefits of consolidation, the more general use of electric power and the refinements of operation.

So long as mine consolidation results in economy, there can be no rational objection to it on the score of supposed restriction of interstate commerce. Herein lies the weakness of attempts to prevent consolidation under the Sherman act. Either the act will run contrary to economy in production or it will prove futile. What is needed is constructive legislation, and judging by the views of national leaders in the politics of 1912, that is what may be expected. The utility of the Sherman act, as well as its economic absurdity, appears to have been demonstrated to the satisfaction of most persons.—Mining Science.

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